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Original Communications.

EXPERIMENTS WITH CHLORAL HYDRATE.

Made by Dr. Hasket Derby, at the Eye and Ear Infirmary, Nov. 8th, 9th, and 11th, 1869. Reported by Mr. A. Lawrence Mason.

[Read before the Boston Society for Medical Improvement by Dr. Hasket Derby.]

As is well known, chloral is made by passing chlorine gas through anhydrous alcohol, with subsequent distillation. The hydrate takes the form of white crystals, easily soluble, and readily absorbed, either when taken through the stomach or by subcutaneous injection.

Liebreich states, in his recently published pamphlet :—" Chloral is to be regarded as a medicine sure to bring about sleep, and free from unpleasant after effects.

"The peculiar physical constitution of the drug, however, furnishes one decisive contraindication to its use. Chloral dissolved in water is slightly caustic, and cannot therefore be administered internally in cases which present lesions of mucous membrane or ulcerated tracts of the intestinal canal. I suppose that a tuberculous affection of the larynx might perhaps furnish a contraindication. In such cases, however, there is no objection to its subcutaneous injection."

The doses given varied from thirty to seventy-five grains (two to five grammes). Thirty grains produced no sensible effect.*

In two cases where forty-five grains had been given, the pulse fell in half an hour from 80 to 70 in one case, from 96 to 84 in the other, drowsiness in either case coming on in a quarter of an hour, followed by natural sleep, which began forty-five minutes after taking the drug. Sleep continued in the first case for two and a half hours without waking, and an hour and a half at intervals afterwards.

In the other case, with the same amount, sleep only lasted one and a quarter hours.

In two more cases sixty grains were given, the pulse falling in one from 120 to 90, in the other from 90 to 60 in about half an hour, with increasing drowsiness. In the first case the patient did not go to sleep for two hours, and then only slept one and one fourth hours. Whereas the other fell asleep in an hour, sleeping heavily two hours, and at intervals for from two to three hours more.

In another case seventy-five grains were given, the pulse falling from 125 to 100 in half an hour, sleep then coming on and continuing for four hours. It was, however somewhat interrupted, and the patient was roused and made to answer questions without much difficulty.

In no instance did sleep come on in less than half an hour after taking the drug. Two or three of the patients complained, on waking, of headache, lasting from one to three or four hours; but otherwise they seemed to experience no ill effects. Appetites good.

The results obtained with this American preparation will be seen not to harmonize with those of Liebreich, who claims a much greater hypnotic power, having with from one and a half to three and a half grammes (twenty-five to thirty grains) produced sleep which lasted from five to fifteen hours. He also considers chloral an anæsthetic of some power, though inferior to chloroform and ether. Dumarquay, on the other hand, in a recent report to the French Academy of Sciences, states, as the result of a series of experiments on animals and men, that he considers chloral as no anæsthetic at all, as the skin is sensitive, no matter how great the intensity of the sleep. He finds it, however, the most rapid of hypnotics.

Note.—Since this communication was made to the Society, Dr. Derby has continued the administration of chloral, with more positive results. One patient, who had been suffering great pain from an ulcer of the cornea, was given gr. lx. early in the evening. The pain was relieved in the course of half an hour, but the patient became somewhat delirious, and, being missed from the ward, was found wandering about alone in the upper stories of the building. On being brought back to his bed he at once went to sleep, passed the night quietly, and continued in a drowsy state all the next day. *He exhibited marked cutaneous anæsthesia*, as did also a female patient who took the same dose. Forty-five grains were given in a case of iritis, attended with severe pain, at 1, A.M. The patient, a woman of 60, went at once to sleep, and awoke the next morning free from pain, but complaining of headache.

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* The chloral used in these experiments was manufactured by Mr. Markoe, of the firm of Joseph T. Brown & Co., of this city.

GANGLION.

By M. F. Gavin, F.R.C.S., Surgeon to Out-patients, City Hospital, Boston.

Those surgeons who have charge of the out-patient department of large hospitals know how common it is to meet with cases of ganglion, how dissimilar the histories, not affording means to elucidate many points in connection with this troublesome disease; and how many resist the ordinary treatment as given in hand-books of surgery. So very seldom does an opportunity offer to dissect a ganglion that pathologists differ as to the cause, the actual condition of the parts and the different stages of the disease. The older surgical writers give us little else than the appearances and treatment. In the views of modern writers, there is great discrepancy.

Bransby Cooper* confounds the disease with bursæ mucosæ, a view that is shown to be incorrect, as bursæ are few in number, and generally placed to relieve pressure from outside or the play of tendons, and a normal part of the body; while ganglion is shown to be an adventitious growth or the dilatation of the sheath of the tendons, and may occur in any place where tendons are, but never in the situation of a bursal tumor. Paget† regards the disease not as new growth, but a dilatation of the fringe-like process of the sheath of the tendon, or a dilatation of the sheath itself. This is the view now generally received, and which Erichsen adopts, classifying these as simple and compound.

It is evident Nélaton‡ does not coincide with Paget and Erichsen, for he speaks of hernia or dropsy of the sheath of the tendons being mistaken for ganglion. Gross§ regards the disease not as a new formation, but a sacculated expansion of the sheath of the tendon, coinciding with the views of Paget. Careful examination leads me to say the disease is very rare among the subjects found in the dissecting room; and others with large experience in the *post-mortem* and dissecting rooms seldom meet with cases of ganglion. However slight this remark, it might afford some ground for hazarding an opinion on the cause of the disease, for there we generally see those past middle age and broken down by dissipation, seldom, if ever, the young and healthy; showing the disease to be more common amongst the young—under 30 years—and my own experience leads me to the same opinion. We are not aware that any writer on surgery speaks of age as having any influence on the disease.

Cases of ganglion have been mistaken for other affections—for aneurism,* when in close relation to an artery; for enlarged bursæ, but, as mentioned before, the situation is never the same until late in the disease, when the growth may be such as to change the original seat of the disease; for hernia† of the synovial membrane or dropsy of the sheath of the tendon; and Barton‡ thinks syphilitic deposits in the early stage, when soft and small, may be mistaken for ganglion.

There is a wide difference in the treatment adopted by different surgeons. All the old writers on surgery agree in condemning the use of the knife and seton—the former leading to sloughing of the tendons and the latter to the formation of fungous granulations, which sometimes put on a malignant aspect, while pressure and blisters were looked upon as the only safe treatment. In the present day, some surgeons are in the habit of using the seton altogether, and with excellent results, while the usual treatment consists in using pressure; applying a strong solution of iodine, amounting to the old blistering method; crushing, by forcibly striking the parts with a book or other solid substance; subcutaneous division of the sac with a tenotomy knife—an excellent way of treating the disease; and, lastly, we have removal by extirpation. As to the last-mentioned method some excellent surgeons have condemned it as uncalled for and an unnecessarily severe proceeding. Of this method Nélaton says—"l'extirpation serait à peu près impossible." Other equally good surgeons recognize the method as legitimate and to be practised when the surgeon sees fit, and foremost amongst the number stands Prof. Syme, of Edinburgh, while Erichsen has occasionally resorted to the method in curing the disease. We are led to make these remarks by the following case, in which extirpation was practised with excellent result.

Case.—Was consulted, at City Hospital, Feb. 2d, 1868, by J. F., a colored girl, æt. 15 years, for a tumor on the back of the left wrist, just below the annular ligament, as large as an English walnut, somewhat ovoid in shape, quite movable, and of a semi-solid consistency. The tumor first appeared fourteen months since, following a hurt (?); but not till the last three months has it interfered with her ordinary duties as a servant, when it has grown rapidly. The tumor was evidently a so-called ganglion, developed in connection with the extensor tendons of the hand, but not involving the annular ligament or wrist-joint. Pressure, with tincture of iodine, and afterwards crushing, had no effect on the growth.

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* Principles and Practice of Surgery, Am. Ed., 1852, p. 263.

† Surgical Pathology, Am. Ed., Art. Ganglion.

‡ Elémens de Pathologie Chirurgicale, tome premier, Paris, 1844.

§ System of Surgery. Philadelphia.

* Cooper's Surgical Dictionary, New York Ed.

† Nélaton.

‡ Pathology and Treatment of Syphilis. John K. Barton. Dublin. 1866.

We now decided on removing the disease by careful dissection, by this means insuring a radical cure. The superficial situation, with no deep attachments, made us think removal would be easy; while the semi-solid condition was against subcutaneous division unless the knife was used freely, which would involve the subsequent risk of inflammation of the tendons almost as much as a careful dissection of the parts, without affording a radical cure. The patient was etherized, a long incision made over the centre of the tumor, and after a slow and careful dissection the growth was *removed entire*, without injuring the annular ligament or the extensor tendons, three of which were laid bare in the dissection. The sac was filled with a jelly-like substance, and more firmly and deeply attached than we were led to suppose at first. Very little bleeding followed the operation. A straight splint on palmar side of forearm to insure rest, and cold-water dressing.

Feb. 13th, twenty-four hours after operation. No pain, swelling or redness; wound looks well.

14th.—Some pain last night; no better this morning. Redness and some swelling round the edges of wound and back of hand. Poultice.

19th.—Swelling and redness all gone; wound partly united and discharges very little pus; strapped, and touched with nitrate of silver. Can use her hand. Splint left off.

From this time forth the patient did well, and with the exception of a little tardiness in cicatrizing, the wound did as well as most flesh wounds of the same magnitude. The motion of the wrist and hand were perfect, and no stiffness or weakness followed the operation, as we might be led to expect from the inflammatory exudation binding the tendons together in such a way as to interfere with their free play.

We have been induced to report this case, as it goes to prove that ganglion, in exceptional cases, may be removed by dissection without running any great risk of severe inflammation of the tendons or subsequent loss of motion in the parts. From a careful review of the case, we are led to think the disease a cystic formation *on* the sheath of the tendon, and not necessarily involving its contents. In this case the walls of the cyst and sheath of the extensor tendons were inseparable, as shown by the cyst-walls when removed; in other words, the growth was a true cyst, while the sheath of the extensor tendon was "button-holed" to a size corresponding to the size of the ganglion; while had the ganglion consisted in a dilatation of the sheath, the wall corresponding to the tendon would be wanting.

Reports of Medical Societies.

NORFOLK DISTRICT MED. SOCIETY OF MASSACHUSETTS. REPORTED BY WM. H. CAMPBELL, M.D., OF ROXBURY.

A REGULAR quarterly meeting of the Norfolk District Medical Society was held at the Everett House, Hyde Park, Nov. 10th, 1869, at 11, A.M.

The President, Dr. Cotting, in the chair.

The records of the preceding meeting were read by the Secretary, Dr. Jarvis, and accepted.

The Secretary announced that the President of the State Society had appointed Dr. Jonathan Ware, of Milton, a Commissioner of Trials, to fill a vacancy occasioned by the death of Dr. Ebenezer Stone, of Walpole.

After some observations from the President, reminding the Censors that it was their duty to have regular meetings, to keep Records, and to make annual Reports to the Secretary of the State Society—the subject for discussion was stated to be "*Inflammatory Rheumatism, and its Treatment;*" and the names of the appointed disputants were then read.

Dr. Monroe, of Medway, opened the discussion by reading a short paper, in which he said that Sydenham was the first to use the word rheumatism, as we now understand it, and that the condition called rheumatism by the ancients was very different from that now known by this name. He spoke also of the various and opposite methods of treatment, of the apparently good results following each, and of the difficulty in reconciling the conflicting statements concerning seemingly opposite remedies. He said that opium should occupy a place in every form of treatment, if not to shorten the disease, at least to relieve the patient. It should be given freely and at short intervals, so as to produce and continue the steady, even operation of the primary effect of the drug.

At first the new practitioner would use some vaunted remedy with opium, but the older practitioner would rely upon the opium alone—it was the great conservator of vital force. Avoid exhausting treatment; if you pull down, you have to build up again. Colchicum had often a good effect, but was very uncertain in its action, and did not suit all cases. He could not discriminate between the cases it would benefit and those it would not; but he thought it a better remedy for patients of good strength, than for the debilitated.

He supported his opinions by a reference to cases, in which no good resulted from other forms of treatment, but which were promptly relieved by the exhibition of opium.

Dr. Salisbury, of Brookline, read a paper in which he referred to the various forms of treatment which had from time to time been followed:—to that of Sydenham by repeated bleedings on the first, second, fourth and eighth days, and the use of clysters and ptisans, and the injunction not to use opium or stimulants; of Barlow, who, although approving the method of Sydenham, thought such treatment might do for mild cases, but for the more severe, it would be necessary to accompany the bleedings with purges, colchicum, and antimony, to arrest the evils which inflammatory action is sure to occasion; and of Bouillaud—still later—who followed the rule of Sydenham only to carry it to a greater extreme.

He then referred to the alkaline treatment of Dr. Fuller, and said that it had proved to us that bleeding was at least unnecessary.

He referred also to Dr. Buckingham's treatment with syrup of lime, in which the urine was not rendered alkaline, and gave Dr. Buckingham's result—an average of ten days in twelve cases observed; and of Dr. DaCosta's treatment with bromide of ammonium, in which the average duration was twenty-two and a half days.

He then spoke of the palliative treatment employed by Dr. Flint, in the Bellevue Hospital, with its average of thirty days, and of the observations of Drs. Gull and Sutton, of Guy's Hospital, in which the "mint-water" treatment was employed, and in which the result was an average of seventeen days; and he thought that more observations on cases treated by the expectant method were necessary to reconcile the discrepancies which seem to exist between these two sets of observations.

He said it would not be difficult for each of the members of the Society to furnish within the next five years one case observed with a view of learning its natural history, and the aggregate of sixty cases would form a valuable contribution to our knowledge. Such a case had occurred to him lately, in a child of eleven years, who almost entirely refused to take medicine, and who appeared to recover completely.

Dr. C. E. Stedman, of Dorchester, read a paper. His own experience was not so very great, as he lived in a very healthy town, but he would give some of the views of others. He thought the alkaline treatment an improvement over the old methods of bleeding, purging, &c., and quoted from Niemeyer's article on Acute Articular Rheumatism, calling attention especially to his recommendation of quinine in large doses (℈i. to ʒss. in the twenty-four hours), which he says is an antipyretic when so administered. Niemeyer also recommends opium in conjunction with the quinine, and wrapping the affected part in batting. Dr. Stedman said that in his own practice he used the powder of English colchicum root, or corm, ʒss. in the twenty-four hours, given in doses of gr. v. at a time, and with good results. He also prescribes a milk diet, objects to blisters, and gives Dover's powder to obtain relief from pain. Syrup of lime had failed in his hands.

The discussion now becoming general—

Dr. Alden, of Randolph, said that bleeding freely had been the practice in his early years, but he had got round so far that he used for the most part opiates, in the form of Dover's powder. Opiates, good diet and warmth were what he relied upon. Quinine he had used, but with very little effect.

Dr. Tower, of Weymouth, had used the alkalies, with opium. He had formerly used the powdered English colchicum in quantities of ʒss., in combination with ℥i. of Rochelle salt, in the twenty-four hours, but had of late relinquished it.

Dr. Edwards, of Hyde Park, said that he had had the disease twice. The first time he was treated with colchicum, the second time by alkalies, and he preferred the alkalies.

Dr. Tirrell, of North Weymouth, said that Doctors had their hobbies; he had read all the theories, and he did not believe that the disease could be much shortened by any course, but that the patient could be made more comfortable. He used subcutaneous injections of morphine; and he also used aconite, and the alkalies. He usually had good results. Diet and clothing were of importance.

Dr. Goss, of Roxbury, spoke of cases he had observed, most of which were treated with alkalies and opiates; and of others in which—after the suggestion of Dr. Da Costa in Penn. Hospital Reports—the bromide of ammonium had been employed. In a part of these latter cases, the alkaline treatment had been employed, and had seemed to disagree, while in all in which the bromide was used, it had relieved the pain, produced sleep, and appeared to act favorably in every way.

He also spoke of sulphur as a useful external application in inflammatory rheumatism. He had seen also one case in which, in two different attacks of swelling of the joints following acute rheumatism, the hypodermic injection of one-sixtieth grain of sulph. of atropia over the inflamed parts gave immediate and permanent relief.

Dr. Bacon, of Sharon, said that he believed that rheumatism would run its course in about twenty days, but he thought it might be cut short of that time by appropriate treatment. One agent would give relief in one case, another in another; but no agent was always sure. Bloodletting had not seemed to him to cut the disease short. Purgatives had done good in his hands, and he once used croton oil with excellent effect in relieving the pain; but he considered opium as the best remedy.

Dr. Edes, of Roxbury, said he should incline—theoretically—to the use of the alkalies, but could not say much from practical experience. He had suffered from an attack of the disease, and had been treated with colchicum with good effect. He thought, however, that if he had the disease again he would incline to have blisters tried.

Dr. Bass, of Hyde Park, had found tonics, such as quinine with opium, to act well, but thought there were no specifics. He favored the alkaline treatment, but said that no two cases could be treated alike. The treatment must be suited to the cases; but if compelled to settle down on a specific plan, he would adopt the alkaline. External applications did little except to protect the parts from the cold.

Dr. Martin, of Roxbury, spoke in favor of the alkaline treatment, to be followed up with quinine; opium to be given only to relieve pain, and spoke particularly of hypodermic injection of morphia. He also recommended moderately cold lotions, composed of two drachms of bicarbonate of soda to a quart of water, to be applied by cloths wet with it. He also recommended the use of bandages of India rubber in cases where there was much pain and swelling left after the acute stage of the disease had passed.

Syrup of lime had completely failed in his hands. He thought that the cases in which the iodide of potassium did good were not cases of true rheumatism, but of periosteal pain, the consequence perhaps of long courses of mercury.

Cod-liver oil acted best in old persons who had chronic rheumatism—probably by increasing nutrition, and not through the effect of its propylamin.

Colchicum suited gouty cases, but no other.

Dr. Streeter, of Roxbury, thought he had seen treatment do good; he could not say it had cut the disease short, but the patients had been relieved. Alkalies had seemed to him to shorten the attacks. Cool applications, often applied, gave great relief.

The shortest case he ever saw ended on the third day, under the use of veratrum viride, in an accidentally excessive dose; the dose taken being enough to produce alarming depression. In former attacks, the same patient had been confined to the house several weeks at a time; since the time spoken of, he has had attacks, and thought he shortened them by resorting to large doses of the veratrum viride.

Dr. Edson, of Roxbury, said that one case had come under his notice in which a lady was in the habit of using the tincture of veratrum viride to control the attacks of rheumatism to which she was subject; and that she usually obtained relief by inducing the specific effect of the drug.

Dr. Miller, of Dorchester, had contented himself with the use of the tincture of colchicum seed, Dover's powder, and an external application of the etherial solution of iodine. In chronic rheumatism he had used lemon juice.

Dr. Arnold, of Roxbury, spoke of the use of simple water dressings, covered with oiled silk, as giving great relief.

Dr. Jarvis, of Dorchester, spoke of the suddenness of the attacks and their apparently spontaneous sudden cessation.

Dr. Holmes, of Milton, said he had a good deal of faith in local applications of the etheriel solution of iodine, used to the point of vesication; and water covered by oiled silk to produce local perspiration. He thought that India rubber probably owed its effect to this local perspiration.

Dr. Bacon spoke of the use of calomel in treatment of rheumatism, and said he had heard it praised by an eminent practitioner as an agent capable of giving great relief, and almost invariably arresting the disease.

Dr. Martin said that calomel had in his experience done good in cases of cardiac complication, but he would not use it in cases where no such complication existed.

In closing the discussion the President remarked that he had always considered rheumatism to be, not a disorder merely, but a *disease*; one as readily diagnosticated as other acute diseases; one having its own peculiar manifestations, and in this connection he might quote from a discourse which most of the members probably had heard of, and a few perhaps had read—that "this disease, with one central constitutional morbific cause, shows itself on the outposts in most astonishing ways; now at the end of one extremity, and in a moment, as it were, leaving that part to appear in a distant one, on the other side of the body. When fixed upon any portion, no one can with any certainty hasten or retard its departure; say how long it will remain, or predict what will be its next point of attack."

This, said five years ago, he still believed to be a true statement. Whenever the *element* essential to the development of a disease produces its *influence* in an individual, *the series of events* peculiar to that disease will follow. Which part in the "succession of processes" will be the first attacked in acute rheumatism cannot be foretold. In some, it will first appear in the extremities; in others, in the heart. He had recently been called to a patient with pain, supposed neuralgic, without swelling or redness, in the wrist. An examination of the heart, already characteristically affected, led him to diagnosticate acute rheumatism, which was subsequently confirmed by its unmistakable appearance in several of the joints.

The proportion of attacks in any one part to the whole number of cases may vary in different years, or in the practice of different physicians in the same year, without apparent cause.

It is a self-limited[*] disease; else how account for the "great success" claimed for each one's favorite drug or applications—to say nothing of the forty medicines of Stillé, an equal number of "new remedies" in Dunglison, and the unnumbered methods of Copland and others. It may cease in the first point attacked, the heart, for example (he has seen such cases), though oftener it will occupy several parts before its course is completed. The order of its coming and its progress cannot be controlled by any known means. This we may as well confess, to be honest, in the outset—the "cure" of a disease as popularly understood being one thing, and a rational professional *care* of it another and quite a different matter. Any simpleton can prescribe remedies so called (my porter will not hesitate to do it, says M. Peisse), but the wisest may well despair of always attaining the best treatment.

"It was owing to this uncertainty as to the best mode of treatment" (says the Hospital Report for 1868) "that the physicians at Guy's determined to study the disease uncomplicated by remedies; for it was assuredly true that no one knew what course rheumatic fever might take if left alone." Long ago, the President said, he had tried the "uncomplicated" plan without drugs, and five years ago had publicly stated that, while such a course "required greater patience and painstaking on the part of the practitioner, the result was satisfactory." He had been in the habit of rallying his professional friends on their *real* "scepticism" as shown in their treatment of rheumatism—at one time bleeding and purging, at another blistering and shampooing, again vomiting and sweating the patient—now, resorting to cold, and now, as the fashion changes, to hot applications; in the meantime throwing in calomel, colchicum, opium and cinchona—not long ago filling his stomach with acids, now again crowding in alkalies to "saturation"—in short, tossed to and fro, and carried about by every wind of doctrine. Surely, such is not faith according to knowledge. Surely, if anything could cast doubts on the efficacy of medicines, such vacillating treatment must have this effect. He believed in a suitable and proper treatment, curative,[*] and by medicine, for the safety and comfort of the *patient*—indeed, it was hardly possible to overestimate its value. He believed also that rheumatism, like other acute diseases, has a tendency to terminate in the restoration of health, though no drug be given. This, in his view, to use the words of Sir Wm. Jenner, *is fact—knowledge—not scepticism.* Personal observation and experience had long ago convinced him of it. The mint water treatment of Drs. Gull and Sutton will ere long convince the reluctant medical world, and do much towards a more rational *care* of those afflicted with this disease. These gentlemen truly say that "to do this fully will often tax all our energies, and require often more consideration than is requisite for prescribing any supposed appropriate *drug treatment.*" And Sir Thomas Watson, certainly not to be accused of prejudice against drugging, only last year to the Clinical Society, said, "to me it has been a lifelong wonder how vaguely, how ignorantly, how rashly, drugs are often prescribed. We try this, and not succeeding, we try that; baffled again, we try something else." And last month, to the same Society, Mr. Paget declared that "in nearly all diseases a natural history was wanted, and this it was rare to find, implying, as it did, an almost dereliction of duty, so that we dare not leave a disease clean and pure."

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[*] "*Incurability* of diseases," .... "not incurability of patients"; "*Incurable acute diseases*," are terms used by Mr. Liveing in his address Oct. 1st, 1869. *Cyclical* is the German term for the same idea (though Niemeyer says rheumatism is not a cyclical disease). These expressions (the first being peculiarly unfortunate), not better than *self-limited*—are not yet demanded by science.

[*] Curare—*to take care of*.

"If a disease," says Mr. Wilks, "pursues a certain course—if it has its origin, its progress and decline, surely we ought to know all about these before we can step in with our remedies, and assert that we have altered its course. Does it not seem absurd for any one to declare that he has changed or arrested the course of a disease when he is utterly ignorant of what the natural course of that disease is?" It is precisely this kind of ignorance, the President said, that has multiplied countless remedies, so called, for rheumatism, and tortured victims beyond measure. Now that some of the leading practitioners of London—eminent and experienced men—have set the example, he hoped that others would no longer fear to follow; and that the profession, here as elsewhere, would perceive that belief resting on any other foundation is "unjustifiable faith, foundationless faith, faith without knowledge, faith in opposition to knowledge, which in medicine is the worst form of scepticism, inasmuch as it implies doubt of truth and belief in error" (Jenner).

"Four or five years ago," says Mr. Wilks, "there was a discussion on the treatment of rheumatism; and if a non-professional writer to the Society had suggested that rheumatic fever patients might recover without medicine, none could have contradicted him. But now, by obtaining a knowledge of the natural history of the disease, physicians were on the road to its proper treatment."

Fortunately, this rational course has now at last been happily inaugurated, and much may be hoped for in its results hereafter. It is a safe course, and we have assurances from highest authorities that it proves beneficial. At any rate, all the complications of the disease and all its lamentable sequelæ have followed other methods. Possibly they may not follow this. The best course for the patient we are seeking for, not merely a few days more or less of temporary confinement in the house or the hospital. Let us then fearlessly study this disease, undisturbed by medicine, whenever an opportunity is afforded us. If, as has been suggested to-day, only one case of this kind in five years be brought here by each one of us, we should soon have valuable data to practise upon. Let us do what we can that here at least the authoritative statement of Dr. Lee, that "American practice in rheumatism is more bold than judicious, more hap-hazard than discriminating, and in many cases more injurious than beneficial," may henceforth, so far as we are concerned, cease to have any foundation in fact.

After the discussion was closed, Dr. Stedman, of Dorchester, called the attention of the Society to the case of Surgeon C. L. Green, late of the U. S. Navy. [This matter is referred to in another part of this JOURNAL.]

The Society then adjourned.

Bibliographical Notices.

Resources of Southern Fields and Forests, Medical, Economical and Agricultural; being, also, a Medical Botany of the Southern States, with Practical Information on the Useful Properties of Trees, Plants and Shrubs. By FRANCIS PEYRE PORCHER, M.D., &c. &c. New Edition, revised and largely augmented. Charleston. 1869. Pp. 733.

THE volume to which the above attractive title introduces us is a new and enlarged edition of a work prepared under authority during the late war, for use in the Confederate States. It is intended as a manual of popular and scientific information, relating chiefly to the various properties of the vegetable products of the South; its purpose being to diffuse a more general and accurate knowledge of the capabilities of Southern soil, and thereby aid in the development of Southern resource. The reputation of Dr. Porcher is an assurance that the work could not have been entrusted to better hands. A thorough knowledge of the Medical Flora of the South, and a mind trained to scientific study, especially qualified him for such an undertaking; and it is obvious at a glance that he has spared no effort to make his work as complete as possible. He has availed himself of every accessible means to aid him, and has given us, as the result, a pretty complete medical botany of the Southern States; this catalogue, however, including many plants not strictly medicinal, besides some others of foreign growth, believed to be capable of naturalization.

With regard to its Medical Flora, the South seems to be especially favored. It is stated by Dr. Porcher that one locality in the northern part of South Carolina, not far from ten miles in diameter, furnishes one and one third more medicinal plants than the whole State of New York. And the Flora generally is far richer than in more northerly latitudes, containing a vast wealth of material adapted to the numberless wants of civilized life.

As has already been stated, the ultimate design of the author was to serve an economical purpose, and to aid the industrial resources of the State by bringing into more general use the plants indigenous to the soil, and also by promoting the cultivation of those of foreign production. So far as the conditions and character of the Southern climate are concerned, the latter suggestion seems not impracticable. With a soil of extraordinary richness, and geographical relations closely resembling those of Eastern Asia, and a climate as mild and varied as that of Southern Europe, there appears to be no good reason why the South may not one day become a garden for home and foreign supply of medicinal and non-medicinal products. If we take the tea-plant as an example, we find that it produces a large yield, even larger than in China, and being a sure crop could not fail of returning a pretty certain profit. The quality of the tea is also found to be equal, and it is even asserted superior, to that of the imported article. It appears from the Patent Office Reports that the best rhubarb thrives in the Middle and Southern States, if carefully cultivated. The experience of the late war in the South, shows the great inconvenience of being deprived of a drug, certainly not among the most important, although possessing a high popular value. It is stated that, notwithstanding the enormous price of this medicine, the amount imported during the war exceeded that of any other. The poppy has also proved itself easy of cultivation, producing an excellent quality of opium. Dr. Porcher even states that he collected at one time, during the blockade, an ounce of opium from garden specimens of the red poppy, which had the odor and the general appearance of the best specimens of the drug. How far certain imperceptible differences in soil and climate might modify the strength and value of the active principles in many foreign plants, can only be determined by time and experiment. Besides those already alluded to, there are many others, valued chiefly for manufacturing or domestic purposes, to the cultivation of which Dr. Porcher devotes much attention. Among these may be mentioned flax, indigo, the olive tree, the mulberry, the castor-oil plant, the maranta, tobacco, the beet, &c., all of which would be found to thrive and produce most profitable crops under proper management.

We shall not attempt to specify even the more important in the list of medicinal agents here presented, many of which are more or less familiar to us through the pages of the United States Dispensatory. It will be sufficient to say that every class is largely represented. Among these, besides astringents, antiperiodics, simple tonics, almost without number, we find emetics, cathartics, diuretics, sedatives, anthelmintics, and a host of other products whose exact value is yet perhaps to be determined, but many of which on careful investigation might prove to possess most important therapeutical properties.

Among the non-medicinal plants included in this catalogue are also a great variety capable of being converted to every conceivable use. The book is indeed a perfect encyclopœdia of practical information on all matters pertaining to the adaptability of vegetable products to the various purposes of life.

We quite agree with our author in urging greater attention to the general study of botany, and in the suggestion of the establishment in our cities of central botanical gardens, in his view as important to the State as geological surveys. Many of our medical schools might well profit by the hint, for how few are the opportunities enjoyed by the medical students of most of our colleges for this necessary branch of study! Either from insufficient endowment, or an indifference on the part of the student, arising perhaps from an underestimate of the remedial action of drugs, it cannot be denied that by far the largest number of our candidates for medical honors are sadly deficient in their knowledge of the first principles of structural and systematic botany.

It is to be hoped that the remark of Dr. Porcher with reference to his own State can never be said to apply to the profession nearer home; "that it is rather regarded as a reproach for the educated physician to be at all addicted to botanical investigations, or that he should possess the outlines of a practical knowledge of general or medical botany."

Our author has something to say in his preliminary remarks on the subject of enlarging the area of available land in the South by a system of irrigation and swamp drainage. The results of such an undertaking, if successfully executed, cannot be overestimated, whether we consider its effects on the public health, by destroying those centres of malarial influence so fruitful of disease; or, more indirectly, by rendering white labor a possibility, and thus elevating morally a large class hitherto debarred from cultivating the soil, and with whom idleness and vice had become almost a necessity. The results of similar enterprises in other countries show that an increased revenue is not among the least of the benefits to be expected from the enormous area of rich and fertile soil thus made available.

It is also urged that mills and manufactories be established for the consumption of the raw material hitherto transported to other parts of the country to be prepared for use. When we consider the resources of the South and the rapid development that must certainly follow, should these suggestions be heeded, it would be difficult to compute the wealth that would accrue to the State. That this revolution has actually begun in many parts of the South is certain. A foreign official residing in Alabama, in a recent report, alluded to the remarkable changes everywhere going on in that State, and dwells at length upon her "unrivalled resources, her minerals, her water, her factory power, her mild climate for continued labor, her forests, her advantages for railroad and water line system, her diversity of soil and climate."

It would be obviously impossible in a work of this character to give anything like a just notion of its merits. It touches upon every point bearing directly or indirectly upon the vegetable products of the South, whether for the purposes of medicine, science, or mechanics, and contains upon every page practical hints and suggestions without number.

The book is the result of great labor; it is written in a philosophic spirit, with a high and patriotic purpose, and the author has conferred a benefit on his countrymen and the profession that cannot fail of its reward.

The Principles of Naval Staff Rank; with its History in the United States Navy for over half a Century. By a Surgeon in the U. S. Navy. 1869. 8vo. Pp. 240.

Since this pamphlet was received a commission has been duly appointed by the Naval Department to determine definitively the matter of which it treats—namely, the relative position of the medical officers in the Navy of the United States. It would therefore be improper to discuss with any affectation of authority, a subject over which the profession at large has no jurisdiction. But we hold it to be no less professionally obligatory upon each and every representative of medical public opinion, to assist our Naval brethren in their long-delayed but now earnest endeavor to convert a nominal and only assimilated, into actual and potential rank, with its attendant pay, prizes and emoluments, and if not "command," at least independence of the caprices, exactions and oftentimes malice of their inferiors in rank and juniors in date of commission, who may happen to be in linear or in executive authority.

The pamphlet under review details the origin and history of what has come to be in plain terms a quarrel between the naval line and the medical officers. The line being practically limited to combatants, the staff is supposed to include surgeons, paymasters, chaplains and engineers. But for very obvious reasons, the medical officers have at last decided to rest their claims upon an independent basis, cutting adrift as incumbrances the other classes, or leaving them to do battle if they are so disposed, in their own way, and for such ends as may be most desirable to them. The forces of the surgeons are so far concentrated and their position much strengthened.

We can hardly regard the essay before us as a dignified production. But it contrives to say, after its own fashion, about everything that we conceive it to be possible to say upon that side of the question, and to represent as ineffably ridiculous about everything that has ever been said on the other side. With much ability; with complete grasp of, and thorough intimacy with, the whole business; with intensity of zeal and honesty of purpose; with sound common sense and much erudition; still in far too great a measure its ability is unadvisedly contemptuous, its knowledge expended upon subordinates, its zeal misapplied, its purpose often divergent from the legitimate mark; its common sense in too close coquetting with nonsense, and its erudition employed in variegating the stern outlines of grave facts and official documents with, as accurately as we can compute them, some eight hundred quotations from all sorts of authors in all sorts of tongues. Very evidently our author has come off conqueror in too many a contest on paper or under the mahogany tree for his own good. He shows the fatal error of most men who have not had the good fortune to be occasionally overmatched, of underrating or despising the enemy. It must not be forgotten that the line have a right to infer that the medical officers have abandoned the claim for linear rank on behalf of the other staff officers as untenable.

The controversy began nearly sixty years ago, with a warm acknowledgment of the services of the surgeons in the war of 1812 by the line officers, prefatory to a memorial from the latter to the Navy Department asking for a definite rank in the service; and it was then claimed and admitted that "the rank and pecuniary emolument ought to bear some proportion to what gentlemen of professional eminence would be entitled to in private life." In 1817, the Board of Navy Commissioners reported that "it seems to be just, that inasmuch as the duties and responsibilities call for an equal degree of professional knowledge as well as of responsibility of character with those of the army, they should be put on the same footing with respect to rank, pay and emoluments." This is to the letter but what the surgeons then asked for and have continued to ask; and it is this plain, reasonable and modest demand that the line are now banded together to resist, as ruinous to what they assume to be exclusively "*their*" Navy. In 1833, 1841 and 1843, successive Secretaries of the Navy provided for such rank in various codes of naval regulations, which Congress always failed to ratify. In 1846 Mr. Bancroft, finding that between Congress and the Department all the attempts of the staff to secure definite rank fell to the ground, fixed, as he intended and supposed, such rank by the order of August 31, 1846.

In 1850, an "able and elaborate" pamphlet, which our writer asserts remains unanswered, gave "a brief history of an existing controversy on the subject of assimilated rank in the Navy of the United States," in which the facts and arguments on both sides were exhaustively and precisively stated.

The point in the dispute with which at present we are exclusively concerned is—that the whole body of Naval medical officers, two hundred in number, complain to their professional brethren in civil life that they are aggrieved by the present relative position of the medical and the line officers as injurious to themselves and the public interest. It is admitted generally that the controversy is detrimental to the service, which should work as a unit. The better class, that is the maturer minds, of the line, it is affirmed, coincide with the surgeons as to the remedy, which rests upon the fact that rank is an essential and vital element of the service.

But the *majority* of the line, comprising the younger and more active officers, still hold to the prejudices which their seniors have abandoned. It is these who have opposed upon all occasions and in every way, and hitherto effectually, all claims of the medical staff to what they regard as their rightful position in the service. In spite of codes, orders, or regulations, all of which they interpret in their own interests and execute as they interpret, for fifty years the surgeons have only obtained by courtesy what has been due and is now demanded as of right. And the arbitrary sufferance which controls these relations is not even an established or recognized custom of the whole line, but depends upon the caprice of every individual officer as to every detail of official relation with himself.

We are told that the line officers graciously tender a "social equality," they only refuse "official equality." To those of us who may happen to be acquainted with the social positions, antecedents and surroundings of both classes, any such admission would only provoke a smile, as does the analogous statement, "the line has conceded to the staff a uniform and assimilated rank amply sufficient to give them highly respectable positions." (!) So far as our own experience goes, the highly respectable position of gentlemen who have spent from seven to ten years in educating themselves at their own expense (and it should always be remembered that the line officer is educated from the start at the expense of his government), have done much more in the way of making the Navy respectable than the Navy can ever do for them in that way.

It would seem that injudicious writers from the other side are doing all they can to fan the embers of discontent by gratuitous contempt. "Sarvey," for instance, whom our author quotes, says "it is an insult to our noble sea heroes to bestow the honorable distinctions of the navy proper upon men whose duties are not absolutely essential, and who run no great risk or exposure." The mean and cowardly slur contained in this sentence was conceived in a far different spirit from that commonly supposed to inspire nobility or heroism. No budding Farragut, for instance, ever could have penned it. The peculiar exploits of our navy, with few exceptions, during the late civil war, made no great demands upon the personal physical courage of its heroes, but in the military service the memory of our own noble "dead upon the field of honor" is too fresh for us to be moved by such a sneer to any other feeling than pity and disdain.

The same writer ("Sarvey") asserts that the whole theory of staff rank is "rank humbug"—that staff officers are "merely classed with certain grades of the line to give them a semi-naval status on certain occasions;" that the term "ranking with, conveys to the line officer no idea of power, authority or command whatever, as those terms are associated with the ranks of all linear grades." This is precisely what the medical officers complain of, and just what they are moving for:—that these terms shall be *made to mean*, as applied to the staff, just what they mean as applied now to the line.

The surgeons are tired of seeing this self-exalted body looking down on the staff "one, as an aristocratic class claiming all honors and dignities; the staff, as if sprung from the *bas monde*, hopelessly shut off by an impassable barrier from official equality, to which no amount of merit, no length of service can ever entitle them." The writer of our pamphlet avers that he is guiltless of ever having advised any friend of his to enter this hopelessly humiliated corps. The naval captains want to "ship their own doctors." So far as such captains might be concerned, it would be fit retribution for their own fractures, amputations and fevers to be managed by such "surgeons" as they would be likely to "ship," but the Department would outrage civilization were it so to imperil the lives of seamen. It will be seen, however, how far the line are ready even to degrade the whole service rather than yield the factitious distinction they have contrived to establish.

One of the consequences of the present unhappy state of things is that in a corps of only 200, there are already 48 vacancies which the chief of the Bureau says "it is impossible properly to fill." And personally *we know this to be so*. The late Dr. Gilchrist, himself always as proud of the Navy as the service had reason to be proud of him, repeatedly solicited the present writer to try to induce some of the more promising medical students in this city to qualify themselves for the naval service; and his own and our own experience may be stated in the exact language of the Report of the Chief of the Bureau, viz.:—"Young gentlemen fitted by their ability to enter the medical corps" *were* "unwilling to join a body offering in return no adequate remuneration in pay, rank, or promotion. Talent, skill, and professional knowledge" (preferred to) "seek their reward through more speedy and desirable channels." And further comment is superfluous.

W. O. J.

A Guide Book of Florida and the South, for Tourists, Invalids and Emigrants. By Daniel G. Brinton, A.M., M.D. Philadelphia: George Maclean.

The amount of valuable and practical information which Dr. B. has incorporated in his unpretending little book makes it indispensable for any person designing a southern trip.

Medical and Surgical Journal.

Boston: Thursday, December 2, 1869.

NOTES FROM FRENCH JOURNALS.

Claude Bernard on the Physiological Effects of Morphine, and on their combination with those of Chloroform.—We give an abstract of a portion of Bernard's elaborate paper on the combined effects of morphine and chloroform, published in the *Bulletin General de Thérapeutique*.

In order to put a dog of average size to sleep with morphine, it generally suffices to inject five centigrammes of the muriate into the subcutaneous cellular tissue. M. B. exhibits to his class a dog which has been treated in this way, and shows the animal to be inert and motionless; but remarks that even 15 centigrammes and upwards may be given without endangering the life of the canine subject. He then operates *seance tenante* on another dog, injecting him with ten centigrammes—half under the skin of each axilla; making a statement worth taking note of for therapeutic application—viz., that this division of the injection into two parts augments the absorbing surface and contributes to rapidity of action. The desired result in the experiment cited was obtained in five minutes. He demonstrates that the animal has fallen into a state of stupefaction which renders him quite immovable, pointing out that were it not for the morphine the creature would not have remained extended on the table without trying to escape. The dog had ceased to take cognizance of the place where he was, and no longer recognized his master. Yet the sensibility persists, says Bernard; for if the animal be pinched it moves and cries out. But, adds the experimenter, these are only reflex movements—there is no attempt at flight or defence—the intellectual faculties are completely benumbed.

Our physiological teacher now proceeds in the following train of remark. Morphine exerts an action the physiological essence of which we do not as yet precisely understand. But, we may say that it bears by election on the elements of the nervous centres, and perhaps also on the sensitive elements. Yet, far from suppressing the sensibility completely like chloroform, morphine in a manner exaggerates the excitability, or rather produces a kind of special sensitiveness to noise. In fact, this special sensibility manifests itself when the board on which the animal lies is struck, or when a somewhat loud noise is made a little way off. He is seen to tremble in all his limbs, and give a start, or even take to flight, having a wild expression in the eyes. In proportion to the intensity of the shock in frogs, this exaggeration of the excitability may become so great as to simulate the effect of strychnine.

After the period of exaggerated excitability, prostration usually sets in and increases to a certain degree of intensity, where it persists for quite a long time. Then the animal comes to himself, and in awaking passes through a new stage of excitability. The intellectual phenomena are the first to be affected and the last to reappear. It is sometimes requisite to wait twenty-four hours for the return of the normal state in this respect. M. B. dwells on the fact of the immobility to which the morphine reduces the dogs experimented upon; which immobility is so great as to allow of their being placed under a stream of water without being tied or muzzled.

The strong doses of opium or morphine* employed by Bernard produce, he repeats, the stupefaction of the animal, and by consequence, its immobility, while allowing its sensibility to remain. At the commencement of the experiment the animal cries when pinched. Later it cries less, but still withdraws its paws. The nerves are only slightly blunted.

Instead of operating as above, we can with weaker doses of morphine obtain a moderate degree of stupefaction, and then suppress the excitability or the sensibility by means of another agent which acts specially in this way, as, for instance, chloroform. This is a combination which M. B. thinks may prove useful and worthy of examination.

He was led to discover this order of phenomena in the following manner. Five years ago he was making experiments with the alkaloids of opium. A dog which had undergone the action of chloroform, while coming to himself, the pupil having already recovered its sensibility, had injected under the skin of its axillæ five centigrammes of muriate of morphine. The animal soon fell into a state of stupefaction which was quite natural, as the dose of morphine requisite to produce this effect had been given him. But, what was curious in his condition, was that the chloroformic insensibility returned at the same time. It would not have been astonishing if the two effects had co-existed, because the two substances had been given. But, it was very singular that the chloroformic insensibility should have manifested itself anew after having disappeared, since no new dose of chloroform had been given which could explain the return of the anæsthesia.

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* It was morphine that was used in the experiments described.—Ed.

The same week in which M. B. was accidentally led to this experiment, the same phenomenon was also observed in the human subject by a German surgeon, M. Neubaum. This surgeon was extirpating a tumor of the neck in a woman. The chloroformic anæsthesia had been maintained for about an hour, the operation not being as yet terminated. Not daring to prolong the action of the chloroform further, in the fear of compromising the life of the patient, M. Neubaum conceived the idea of substituting morphine, which had been employed in surgical operations before the discovery of the anæsthetic properties of chloroform. But, instead of obtaining merely the effects of the morphine, he saw the chloroformic anæsthesia remain stationary, and for a long time.

It is important to know that if the experiment first made be reversed the results are not the same. Giving chloroform to an animal already under the influence of morphine, you find a different state of things. Here is a dog which got morphine a little while ago. He is in the condition produced by the alkaloid at the outset. His sensibility, or rather his excitability, is much exaggerated. We make him inhale chloroform in a dose much smaller than would be necessary to produce anæsthesia in the normal state; and this sensibility, although it had been previously exalted, disappears very rapidly. The animal is under the influence of the morphine and of the chloroform together. M. B. knows no other means of rendering animals so completely motionless.

In physiological experiments Bernard, therefore, combines chloroform with morphine, but gives the morphine first and then the chloroform. When the chloroform is used first, the insensibility produced is prolonged a very great while by superadding morphine; whilst when the morphine precedes the anæsthetic, scarcely is the inhalation of the latter interrupted when the sensibility reappears very quickly. Thus we have a means of alternately suppressing and re-establishing the sensibility very rapidly—an important thing to do in certain cases.

Bernard goes on to say that this combination of the effects of chloroform with those of morphine may be serviceable in surgery. But, as sulphuric ether supplies all our wants in this direction, we forbear to follow him further in this path. The monograph contains much more, also, of physiological dissertation, which we have not space to report here.

It should be borne in mind that comparison of these experiments with those on opium, which we quoted in our notice of Dr. Hammond's book on "Sleep," a short time since, is invalidated by the fact that it was *morphine* that was used by Bernard. It is also worth while to remember that Dr. Hammond did not give the opium till long after the animal had recovered from the effects of the chloroform.

Surgical Poisoning.—In an abstract of a clinical lecture (*Union Médicale*) on the above subject by M. Maisonneuve, his theory of surgical intoxication is summed up by the reporter as follows:—1. All constitutional complications (*accidens*) of operations are the result of poisoning. 2. The toxic substance almost always has its source in the death and putrefaction of the fluids secreted at the surface of the wound; though sometimes it arises from certain excrementitious liquids, such as the bile, the urine, the intestinal fluids and gases. 3. The penetration of the toxic fluids into the system is effected through the gaping orifices—cellular, lymphatic and venous—which exist at the surface of the wound.

These three propositions have for their corollaries the two following:—1. The poison must be prevented from forming by avoidance of the death and putrefaction of the secreted fluids; to do this we have as resources subcutaneous operations, and also dressings with alcohol and antiseptics. 2. The dead and putrid fluids, as well as those which are excrementitious, must be prevented from penetrating into the orifices of the wound, either by removing the liquid matter by constant suction, or by effecting the closure of these orifices through cauterization, extemporaneous ligature, or some other means adapted to each case. In a word, the poison forms at the surface of the wound, or is the product of an excrementitious fluid. Our duty is, then, in the one case to prevent it from forming; and, in the other, from entering. All operative procedures and dressings, therefore, should be done with this end in view.

Purulent Infection is particularly alluded to at the close of the lecture; and with relation to it M. Maisonneuve says that whilst on the one hand the greater part of other toxic substances are endowed with extreme fluidity and insinuate themselves easily into the organization, either through a slight excoriation of the dermis, or through the unbroken surface of the mucous membranes; pus, on the other hand, the essential portion of which is formed by voluminous globules, cannot reach the torrent of the circulation, save under the strict condition of its introduction in mass (as in the case of a perforation of a large vein near an abscess, which is extremely rare); or else by suppurative phlebitis, in consequence of which the pus is secreted in the vein itself—the usual mode of commencement of purulent infection.

It becomes, then, important to be cognizant of the development of suppurative phlebitis, since by that means we get our prophylactic and therapeutic indications. M. Maisonneuve lays down two conditions as necessary to the occurrence of suppurative phlebitis as a consequence of operation:—1. The existence of the elements of pus formation; 2. The contact of those elements with the lining membrane of the veins.

Fracture of the Thigh.—In another number of the same Journal, it is stated that M. Léon le Fort presented to the *Société Impériale de Chirurgie* a patient whom he had successfully treated for fracture of the thigh at its middle portion, by means of a permanent extension apparatus that he employs to make permanent extension with in coxalgia. The recovery, which dated back several months, left nothing to be desired. The patient walked very easily, without limping, and if there were any shortening it was measured by less than one centimetre. There was not that stiffness of the knee that is usual after fractures of the thigh; and M. Le Fort attributes that result to the care which he takes to secure the movement of the joint from and after the thirtieth day of treatment. He practises extension not by the foot and leg, but from above the knee, by means of strips of diachylum plaster applied in the region of the femoral condyles and maintained in place by other bands. These strips hold very firmly, and bear powerful traction.

OPIUM AS A PARTURIENT AGENT.—The June number of the *New York Medical Journal* contains an article by P. C. Barker, M. D., of Morristown, N. J., "Concerning the Action of Opium on the Uterus, and particularly as a Parturient Agent." This article has been referred to in various Journals, and cases have been reported in them as confirmatory of Dr. Barker's theory. But, as no such discussion has arisen upon the subject as we were waiting for, we allude to it, now, for the purpose of making a remark interrogatory.

Dr. Barker's last case is a fair specimen of the four examples he cites as showing oxytocic power in opium. It is as follows:

> "Mrs. G., 28, multipara. In labor a number of hours. Os uteri remaining about half dilated, and rigid. Gave morph. sulph., gr. ¼. About half an hour after, while making an examination during a pain, my first and second fingers being applied to opposite sides of the os, in order that I might observe the effect of the pain upon its hitherto unyielding tissues, I was surprised to feel it easily dilating."
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> "In this case," Dr. B. says, "I suspected that while opium stimulated the fibres of the body of the uterus (longitudinal and oblique), it also relaxed the circular fibres of the os. Further observation, in a large number of cases of varied character, has convinced me that opium, instead of having a general anodyne effect upon the uterus, possesses this special power as a parturient agent. I say general anodyne effect, for while it sometimes quiets uterine contractions (witness its universal use for this purpose), yet it is in those cases in which the circular fibres are called into action alone, or where the longitudinal and oblique fibres contract irregularly—in short, in *false pains*. I am fully persuaded that *opium never did or can arrest a physiological* labor.

"I have many times been called to cases in which the pains have returned regularly and with increasing intensity for a number of hours without producing dilatation to any extent, and after giving a full opiate have had the satisfaction of finding a marked improvement after sufficient time had elapsed for its absorption, the patient having even harder contractions with less distress than before, and the os uteri being speedily dilated."

Further on he says, "I think that opium meets two important indications in *placenta prævia*:—1. It facilitates dilatation, thus shortening the period of greatest danger. 2. It promotes the expulsive power of the uterus. It also serves to lessen hæmorrhage by a special hæmostatic action."

Opium was recommended by Murphy in his "Lectures on the Principles and Practice of Medicine" (edition of 1852) as a valuable remedy for exhaustion of the parturient uterus; though as he describes its behavior, it may well be that its action is upon the exhausted parturient *woman*. Rest having been procured, the flagging energies of the entire system renew their strength, and the patient begins as it were her labor anew. A *full dose* of opium usually stops the labor, when the patient is worn by the teazing of ineffectual pains, and sends her to sleep to awake after a while refreshed, to grapple with more normal parturient functions.

Dr. Buckingham, Professor of Obstetrics at Harvard University, has, however, for many years past, repeatedly given out as the result of his large experience in midwifery, that small doses of opium have a direct oxytocic action.

Now it is to be remarked that Dr. Barker, in the caption of his paper, points out *opium* as the parturient agent. But in the four cases he reports as bearing on this point particularly, it is sulphate of morphine that was given; the dose varying from a quarter to a third of a grain. If, then, the alleged result in those cases were not a mere matter of coincidence, it remains to inquire whether the dose were a *small* one, as for those particular patients, or whether the effect was due to the fact that sulphate of morphine was used, separated from the other alkaloids of opium. If the latter alternative be favored, then the question would gather interest in connection with the experiments of Bernard described in a previous column. In those experiments, though the animal was stupefied, reflex action remained. When Dr. Barker gave one-third of a grain of morphine, if the drug was pure, that quantity was—as a soporific—the equivalent to two grains of opium—certainly a full dose for an average parturient.

IN view of the following letters, we think that whenever the be-knighted Professor in "Auld Reekie" turns the key of that box covered with crimson velvet, and containing not only the "Freedom of the City," but also probably the various *foreign* certificates of honorary appointment, which he says he has received in greater abundance than any other man in his position—whenever he opens that casket he will do well to repeat to himself the familiar Scotch words, "dinna forget."

Mr. Editor,—I was gratified at seeing Dr. Jacob Bigelow's remarks, and also your editorial, relative to Sir James Y. Simpson and his apparent forgetfulness of the fact that anæsthetics were first introduced to the world from this city.

This omission to give due credit to the obvious claims of another is in striking contrast with the tenor of a letter now lying before me, and addressed by Sir James to the late Dr. Wm. T. G. Morton about a year after the latter proved to the satisfaction of Drs. Warren and Hayward, at the Massachusetts General Hospital, the safety and certainty of etherization in surgical operations. (See this JOURNAL, Nov. 18, 1869.)

Sir James's letter is written on a flyleaf of a pamphlet by himself, on chloroform, then but recently introduced into practice.

Appended to this note you will find the principal part of said letter.

Yours truly, HENRY I. BOWDITCH.

"MY DEAR SIR,—I have much pleasure in offering for your kind acceptance the accompanying pamphlet. Since it was published we have had various other operations performed here, equally successful. I have a note from Mr. Liston, telling me also of its perfect success [that of chloroform] in London. Its rapidity and depth are amazing.

* * * * * * * *

"Of course the *great* thought is that of producing insensibility, and for that the world is, I think, indebted to you.

"With very great esteem for you, allow me to subscribe myself

"Yours very faithfully, J. Y. SIMPSON.

"*Edinburgh*, 19 *Nov.*, 1847."

A MEDICAL friend writes to us:—

"*Dear Sir*,—In view of what is about this time said concerning the Navy surgeons, it occurred to me me that the enclosed extract from 'Bleak House' would appear well in your JOURNAL. * * *

"Yours truly, W. I."

"By Heaven!" cried Mr. Boythorn, who interested himself strongly in the subject, though I need not say that, for he could do nothing weakly; "I rejoice to find a young gentleman of spirit and gallantry devoting himself to that noble profession! The more spirit there is in it the better for mankind, and the worse for those mercenary task-masters and low tricksters who delight in putting that illustrious art at a disadvantage in the world. By all that is base and despicable," cried Mr. Boythorn, "the treatment of surgeons aboard ship is such that I would submit the legs—both legs—of every member of the Admiralty Board to a compound fracture, and render it a transportable offence in any qualified practitioner to set them, if the system were not wholly changed in eight and forty hours!"

"Wouldn't you give them a week?" asked Mr. Jarndyce.

"No!" cried Mr. Boythorn firmly. "Not on any consideration! Eight and forty hours! As to Corporations, Parishes, Vestry-Boards, and similar gatherings of jolter-headed clods, who assemble to exchange such speeches that, by Heaven! they ought to be worked in quicksilver mines for the remainder of their miserable existence, if it were only to prevent their detestable English from contaminating a language spoken in the presence of the Sun—as to those fellows who meanly take advantage of the ardor of gentlemen in the pursuit of knowledge, to recompense the inestimable services of expensive education, with pittances too small for the acceptance of clerks, I would have the necks of every one of them wrung, and their skulls arranged in Surgeon's Hall for the contemplation of the whole profession—in order that its younger members might understand from actual measurement, in early life, *how thick skulls may become!*"

[And yet the Chief Lord of the Admiralty in England told one of our surgeons not long since he was thankful to say that the medical officers of the British Navy were not treated as the American surgeon whom he was addressing had fared.—ED.]

WE call especial attention to the remarks on Naval Staff Rank in a bibliographical notice, by Dr. W. O. Johnson, in to-day's issue.

AT the quarterly meeting of the Norfolk District Medical Society, held at Hyde Park, Mass., Nov. 10th, 1869, Dr. Stedman, of Dorchester, asked the attention of the Society to a recent trial in the Navy. He read to the members the General Order, No. 140, of the Department, which promulgates the charges against, and sentence of Dr. Charles L. Green, for refusing to take the name of a seaman off the sick list when ordered to do so by his commanding officer. He also quoted part of the article commenting on this sentence from the November number of the Philadelphia *Medical News and Library*, and announced that Dr. Green had resigned his commission as Past Assistant Surgeon in the Navy.

Dr. C. C. Holmes, of Milton, said he took pleasure in moving the following resolutions:—

"The members of the Norfolk District Medical Society, having read the General Order, No. 140, of the Navy Department, containing the charges against, and sentence of Dr. Charles L. Green, late Past Assistant Surgeon U.S.N., *Resolve*:—

"1. To express their sympathy with Dr. Green, and their approval of his conduct.

"2. That the resignation of his Commission was due to the dignity of the profession which he represents.

"3. That while his reprimand stands on record, it is not easy to see how any young gentleman of education and spirit can apply for admission to the Medical Staff of the Navy.

"4. That the present status of the Medical Staff of the Navy, impairs the efficiency of the corps and the service, and constitutes a grievance demanding redress by Congress.

"5. That the Secretary of the Society be directed to send a note of this action of the Society to Dr. Green, and to print it in the *Boston Medical and Surgical Journal* and the *New York Medical Gazette*."

The President, Dr. Cotting, said that he agreed heartily with the spirit of the resolutions, and suggested that 300 copies be printed for circulation, and a copy sent to each member of Congress from Massachusetts; which was agreed to.

Dr. Hazleton, of Mattapan, in seconding the resolutions, gave some details of his medico-naval experiences.

Dr. Edes, of Roxbury, said he was one of those who had escaped from naval life into freedom, and remarked that the case in question had its origin in the undefined authority and status of the Medical Staff in the Navy. No one who lived on shore could understand the importance of an officer's rank on board ship. On it depended not only his comfort but the respect due from others, and almost his own self-respect. The medical officers did not want *command*, but they desired a position suited to the dignity of the profession they represented. He had the pleasure of knowing many honorable and gallant naval officers who were far above the meanness which could offer indignities to gentlemen of other professions associated with them, but he wished the doctors to receive by law and as rights even more than the privileges which are now often accorded to them by usage and courtesy, but which may be, as in the case of Dr. Green, infringed by the whims or overbearing disposition of a martinet captain.

Dr. Burgess, of Dedham, said he wanted the resolutions passed, not only from sympathy with Dr. Green and the medical corps of the Navy, but also in behalf of the men before the mast who had a claim on the surgeon's judgment and skill.

The resolutions were adopted unanimously.

THE SICK LIST ABOARD SHIP.—A naval surgeon puts a sailor on the "sick list." This does not mean, we are told, that he *orders* him off duty. It is simply the surgeon's official *recommendation* to the commander of the ship that the man be excused from work. In other words, it is the Doctor's expression of professional opinion that his patient is too sick to aid in working the vessel. If, then, the commander orders the surgeon to take a man's name off his sick list, it is equivalent to telling the Doctor to say he thinks the patient is *not* too sick to work, when he thinks he *is*. What is this but an order to tell a falsehood?

MORPHINE.—*Editor Boston Medical and Surgical Journal.* SIR,—The article copied by you in your Journal of the 11th inst., respecting *morphine*, from a *New York Drug Price Current*, is calculated to do great injury to the drug interests of this city and to us in particular.

Having been intimately connected as manufacturing chemists with the dealers in drugs and chemicals for a period of fourteen years, and the *only house in Boston* whose brand of morphine is known to physicians and the Trade throughout the country, our capability of correctly judging of the truthfulness of such statements is certainly second to no others. We have no hesitation in pronouncing the charges, false and malicious, in the highest degree.

We do not believe that there is, or ever has been, a single ounce of "smuggled morphine" offered for sale in this city. These charges are of a like nature with many others made by irresponsible New York parties against Boston houses, Boston trade, productions, &c., only they are more gross and libellous. They only become worthy of notice or denial, when they are copied into respectable journals.

Yours, &c., JAS. R. NICHOLS & Co.,
Manufacturing Chemists.
150 *Congress Street, Nov.* 23, 1869.

FRANCIS CODMAN ROPES, M.D., OF BOSTON, U. S.—On the 15th ultimo died one of the most rising surgeons in the city of Boston. A brief notice of his career in a British journal of medicine seems called for, inasmuch as the subject of the memoir was resident for some time in this country, and, in particular, made himself many friends at Edinburgh.

Dr. Ropes was educated at the Harvard University. After taking his doctor's degree, he came over to visit various European schools. By way of qualifying himself to profit fully from his continental studies, he spent his first winter in Dresden, where he worked diligently at languages, and also fostered, by way of relaxation, his love for music. He next worked in Berlin, under Virchow and Recklinghauser, and went, also, to Vienna and other schools of note. He remained some time in Paris, on his way to England, and next proceeded to Edinburgh, to spend the winter of 1863–4. Here the writer of this notice first met him. He came prepared to work and learn, and make the best use of his time; and he was soon installed as an extra clinical clerk under Dr. Laycock. He devoted himself, with great assiduity, to urinology, and undertook, for some months, the daily examination of the urine of forty patients, accurate reports of which he registered. He was constantly in the infirmary wards. His heart, however, was set upon surgery, and he looked forward to practise this department in his native city. He was so desirous to possess a British diploma in surgery, that he underwent the examinations for the conjoined licenses of the Royal Colleges of Physicians and Surgeons, during his stay in Edinburgh, and he had the great gratification, ere he left that city, of being elected a Fellow of the College of Surgeons. He returned to Boston at the end of 1864, during the great war, and was soon engaged in the service of his country as an assistant surgeon in the army. He was never in any action, but did some heavy duty at the military hospital of Readville. He lost a brother in the earlier part of that long struggle. At the end of the war he established himself in surgical practice at Boston, and, in 1867, was appointed one of the Surgical Staff of the City of Boston Hospital. This gave him work in which he delighted and showed great zeal.

An attack of scarlatina, some years ago, left behind it traces of renal mischief, and Dr. Ropes suffered from albuminuria, more or less, ever afterwards. He trusted that, with care, he might not suffer to any great extent. Gradually, however, he failed in health, though carrying on his work with remarkable energy. His last illness was of only a fortnight's duration. A few days after its commencement, he described a peculiar sensation which he experienced in his head, a kind of explosion, and from that time he was delirious, and, finally, succumbed to the effects of uræmia. His age was thirty-two.

Dr. Ropes was beloved by all who knew him. His career was, in all respects, a most exemplary one. He inspired energy and vivacity wherever he went. His life was pure and blameless. Our profession can ill spare such men.—*British Medical Journal,* Oct. 15.

MEDICAL LECTURES TO MIXED CLASSES.—A fortnight ago several (female) students of the Women's Medical College, of this city, attended a clinical lecture at the Pennsylvania Hospital. Before and after the lecture the male students made some demonstrations, not to be approved in every respect. The daily press made severe comment on the occurrence, not quite undeserved, but we also call attention to the editorial remarks of the *Public Ledger* in this connection. It discusses the question, whether *effective* clinical lectures to mixed classes of male and female students are practicable, and if practicable, whether they are desirable? * * * * * * * * * * * * The medical teacher, even the most practical and indurated among our experienced professors, must feel a reserve and an embarrassment while delivering his lectures before a class composed of both women and men. He cannot help it. His training as doctor and gentleman has taught him reserve when talking to women on medical subjects, if other men be present. It will take time to break through this barrier. While it exists, any lecture at which students of *both* sexes are present, must fall short of what it ought to be. Hence, as it seems to us, the effort to hold clinics in presence of both sexes, should be undesirable to either, even if it is not impracticable. Both the female students and the male students should seek for separate clinics, in order to promote efficiency of instruction.

Since this occurrence the students of the University and Jefferson Medical Colleges have passed resolutions not to attend the Pennsylvania Hospital clinics. We shall recur to the subject next week.—*Medical and Surgical Reporter.*

HOT WATER.—A paragraph has been going round the papers to the effect that the Hon. Edmund Burke, when ill, used hot water as a panacea. He used to pour it hot from a tea-kettle into a basin, and sup it with a spoon as one would soup. Hot water consumed in this way forms what the ancient medical world would call a diluent, deobstruent, and diaphoretic. The water, be it observed, should be hot—not what we call *lukewarm*, or, as our fathers would have called it, *hleaw;* for the word *lew* or *luke* (which is a corruption) expresses the whole idea, and the compound word *lukewarm* is, as Horne Tooke said, an unnecessary reduplication, just as if one should say *coolwarm* or *hotwarm. Lew* or tepid water makes man puke; but water, as hot as can be sipped, stimulates the stomach, assists it in pushing on ill-digested or half-digested food, moves the bowels, and provokes perspiration and urine. The addition of a squeeze of lemon-juice to the hot water makes it extremely palatable if the tongue is flabby or ill-tasted; and any purgative, followed by this hot drench, acts quickly in a half-dose. Some years ago, dyspeptics were to be seen sipping hot water just after dinner, for the prevention of gastrodynia and water-brash; but even physicians have fashions, and this one has gone to its own place.*—*London Medical Times and Gazette.*

At a meeting of the New York County Medical Society, as we learn from the N. Y. *Medical Gazette*, Dr. Jacobi exhibited some experiments with chloral on rabbits; and detailed "the results of his practice with the new agent, since his arrival home three weeks ago, and in every case it had been attended with perfect success, inducing, when the most powerful narcotics had failed, a long, peaceful, refreshing sleep, from which the patient had waked without headache, nausea, or sickness of any kind, and always with increased appetite.

"At the conclusion of the reading of the paper, the President called on Dr. John C. Peters for a few remarks on the subject; who said that he had never experimented with this agent, for there was none yet in the country, except that brought by Dr. Jacobi, but there was some now being manufactured by an excellent chemist, Riderer, and there was also some in port, on shipboard." In reply to the latter statement we would say that chloral was manufactured by Professor Markoe, of this city, in season to be advertised for sale here November 4th, 1869.

Death from Chloroform.—A case of death from chloroform is reported from Oxford. Two drachms of chloroform were administered to a young man, a student of Lincoln College, of 19, in order to the performance of a slight surgical operation. The chloroform was administered on wool in a handkerchief. The *post mortem* revealed a dilated heart with thin walls. It seems probable from the results of *post-mortem* examinations, that weak and dilated hearts are sufficiently common, even amongst robust young men, to lead to distressing accidents with chloroform, and that the weakness is not detectible by ordinary examination. Under these circumstances it is worth considering whether the mixed vapor of ether and chloroform suggested by a committee of the Royal Medico-Chirurgical Society should not be substituted.†—*London Medical Times and Gazette.*

The Pons Varolii the nervous centre of General Convulsions.—H. Nothnagel (*Virchow's Archives*) arrives at the following conclusions in regard to the *nervous centre of general convulsions*, which are derived from actual experiments. The centre of general convulsions is situated in the substance of the pons. Its lower boundary is corresponding to a section at the height of the inferior border of the pons. The faculty to perform the function of a centre of spasms is to be denied to the substance of the medulla oblongata.

Finally, he endeavors to prove that the spasms are produced by way of reflex action. In some instances the section of the medulla oblongata had been made below the pons, the animals remaining absolutely quiet. Again: the convulsions occurred if the section had left a portion of the pons connected with the medulla oblongata, showing the centre of action to be situated outside of the medulla.

At last the anatomical condition of the region of spasms is confirmatory to the view of reflex action. The region nearly corresponds to the situation of the gray nuclei and root-fibres of the sensitive cranial nerves. While the nuclei and root of the motor cranial nerves are near the raphe, those of the sensitive nerves are more lateral. The root-fibres of the portio major trigemini, in particular, descend, according to Schroeder von der Kolk, through the whole length of the medulla. This anatomical condition, it must be conceded, is no direct proof of a reflex action, but it renders it admissible and plausible.

From all this it seems that the convulsions following the injury of a defined region on the floor of the fourth ventricle are to be explained as spasms induced by reflex action.—*Medical Record.*

"Secundum Artem."—The old direction formerly contained in prescriptions that they should be compounded *secundum artem* is still sometimes necessary, notwithstanding the advanced knowledge of our times. A *pharmacien* having received the following formula to dispense—chlorate of potash 8 grammes, hyposulphite of soda 4, syrup 62, water 125—to expedite matters, put both the salts in the mortar and commenced a vigorous trituration. An explosion immediately took place, the pestle being propelled to a distance, and the operator getting some bad bruises. To prepare such a formula without danger, the salts should have been separately dissolved—*Union Pharmaceutique.*

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* Behold the virtues of "herb teas"!—Ed. Boston Medical and Surgical Journal.

† Amen! Provided the proportion of chloroform be infinitesimal.—Ed. B. M. & S. J.

Medical Miscellany.

Health (?) of the French Emperor.—A correspondent, who signs himself "one of the oldest subscribers to your Journal in Vermont," thinks it perfectly well understood that the Emperor Napoleon's disease is—something very improper, and which would hardly have the audacity to cling to a royal personage. The last account from over the water is that his Imperial Majesty has fungus of the bladder.

Minot's Ledge not a Suitable Site for a Lunatic Hospital.—The opinions of several of our leading physicians have been taken on the subject of certain proposed sites for lunatic hospital purposes. Their replies are embodied in the epigram of one of them—that the three worst situations he knew of for an insane asylum were Breed's Island, the Winthrop Farm, and *Minot's Ledge.*

Questions to be Settled.—Did Columbus discover America in Britain or on this side of the Atlantic? and, Was chloroform the first anæsthetic, or was it an *after-thought?*

The *Union Médicale* reports a case of operation for the removal of cataract in an ass. Is that anything new?

New Properties and Uses of Naphthalin.—The naphthalin, discovered in 1820 by Garden, is found to be of great importance. Its derivatives have produced benzoic acid, benzol, nitro-benzol, and aniline, as well as fine yellow and red dyes. The yellow was described in a translation from Dr. Brimmeyer in the August number of this Journal.—*Journal of Applied Chemistry.*

Cord around Neck of Child.—Churchill says the cord is coiled around the infant's neck once in nine or ten times, especially when the cord is longer than usual. Simpson says the cord was twisted once, twice, or more times around the child's neck, one hundred and sixty-four times out of one thousand four hundred and seventeen cases.—*Medical Gazette.*

Maniacal Homicide.—Another horrible tragedy, by an insane man, occurred in Evath Co., Canada, early in October. James M'Carty, who is about 35 years old, had for some time shown decided symptoms of insanity, but was permitted to go at large, until in a frenzy he took the lives of his aged father, Rev. Mr. Hurley, a friend, and of his own son, 6 or 7 years old. His wife escaped. A "*lettre de cachet*" would have saved these lives, but the physician who furnished it might have been dragged before a court for his pains, because, forsooth, under the restraint of a hospital he did not appear to be violent! We fear that it will be a long time before the evils caused by the recent sensational insanity literature will be removed.—*Med. & Surg. Reporter.*

Mythology tells us that Io died because of her intense love for Jupiter; but the charm of the romantic story has lately been destroyed by a chemist discovering *Io*-dide of potassium.—*Druggist.*

Advice to the Medical Corps of the Navy.—Fight it out on this Line!—*Exchange.*

To Correspondents.—Communications accepted:—Records of Vermont Medical Society—The Novel Defence attempted at the Trial of Samuel W. Andrews for Murder—Hints to Medical Men about to travel in Europe—Hot-air Bath in Strangulation.

Books and Pamphlets Received.—A Treatise on Intra-ocular Tumors. By H. Knapp, M.D., late Professor of Ophthalmology and Surgeon to the Ophthalmic Hospital in Heidelberg. New York: Wm. Wood & Co.—Notes on the Principles of Population. Montreal compared with London, Glasgow and Manchester, with an Examination of the Vital Statistics by Philip P. Carpenter, B.A., Ph. D., one of the Honorable Secretaries of the Montreal Sanitary Association. By Andrew A. Watt, Montreal. Pp. 36.—The Pathology of Bright's Disease. By William B. Lewis, M.D., New York. With Illustrations. Turner & Mignard. Pp. 30.—Fifteenth Report upon the Registration of Births, Marriages and Deaths, in the State of Rhode Island, for the year ending Dec. 31, 1867. Prepared under the direction of John R. Bartlett, Secretary of State. By Edwin M. Snow, M.D. Pp. 88.

Died,—In Acton, Mass., Nov. 17th (of phthisis), Chas. Little, M.D., aged 33, son-in-law of Dr. Harris Cowdrey, of that town.

Deaths in nineteen Cities and Towns of Massachusetts for the week ending Nov. 27, 1869.

Cities and towns.	Number of deaths in each place.	Prevalent Diseases.			
		Consumption.	Pneumonia.	Typhoid Fever.	Croup.
Boston	89	18	10	3	1
Charlestown	9	2	0	1	0
Worcester . .	16	4	3	1	0
Lowell	17	3	1	0	0
Milford . . .	3	1	0	1	0
Chelsea . . .	6	1	1	0	0
Cambridge .	11	3	0	1	2
Salem	8	2	3	0	0
New Bedford	14	5	0	0	0
Springfield .	8	2	0	1	0
Lynn	11	2	2	0	0
Pittsfield . .	2	1	0	0	0
Fitchburg . .	2	0	0	1	0
Newburyport	4	2	0	0	2
Somerville .	4	0	0	0	1
Fall River .	8	0	1	0	1
Haverhill . .	2	0	0	0	0
Taunton . .	4	0	0	0	1
Gloucester .	8	4	0	0	2
	226	50	21	9	10

New Bedford reports two deaths from measles and three from whooping cough; Springfield two from smallpox.

George Derby, M.D.,
Secretary of State Board of Health.

Deaths in Boston for the week ending November 27, 89. Males, 41—Females, 48.—Anæmia, 1—disease of the bowels, 1—inflammation of the bowels, 1—congestion of the brain, 2—disease of the brain, 1—inflammation of the brain, 1—bronchitis, 1—burns, 1—cancer, 1—cholera morbus, 2—consumption, 18—convulsions, 1—croup, 1—debility, 5—diarrhœa, 2—diphtheria, 2—dropsy, 2—epilepsy, 1—scarlet fever, 1—typhoid fever, 3—gastritis, 1—insanity, 1—disease of the kidneys, 2—laryngitis, 1—disease of the liver, 2—congestion of the lungs, 3—inflammation of the lungs, 7—marasmus, 4—old age, 6—paralysis, 4—premature birth, 1—puerperal disease, 2—rheumatism, 1—spina bifida, 1—disease of the spine, 1—stricture of the œsophagus, 1—unknown, 2—whooping cough, 1.

Under 5 years of age, 34—between 5 and 20 years, 2—between 20 and 40 years, 20—between 40 and 60 years, 15—above 60 years, 18. Born in the United States, 61—Ireland, 20—other places, 8.